

# **Terms of Reference**

**For**

**Strengthening Assam State Disaster  
Management Authority's capacity for Post  
Disaster Needs Assessment (PDNA) under  
Assam Integrated River Basin Management  
Project (AIRBMP)**

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# 1 Background and Context

The State of Assam is strategically important as the largest and most populous State in the Northeast and holds great potential for development through improved water resources management. However, Assam is one of the States hardest hit by erosion and flood hazards. Climate change is expected to exacerbate current hazards and lead to more frequent floods and accelerated soil erosion. A progressive and systematic approach is needed to address the key water-related risks and opportunities in Assam.

The Assam Integrated River Basin Management Project (AIRBMP), responds to the Government of Assam's (GoA) request to support improved water resources management for economic growth and prosperity, including addressing flood and river erosion risks. The project focuses on building the requisite institutional capacity, filling critical knowledge gaps, and implementing integrated solutions to tackle the current challenges for climate resilient growth and improved livelihoods. The expected funding is US\$ 500 million following a Multiphase Programmatic Approach (MPA). The MPA would consist of three overlapping phases or projects over a total of ten years. The first phase of the project is US\$ 135 million. The Project Development Objective (PDO) of the first phase is: To strengthen institutional capacity for integrated water resources planning and management, and to enhance preparedness for flood and river erosion risks in Assam.

Key implementing agencies for AIRBMP include Water Resources Department (WRD), Flood and River Erosion Management Agency of Assam (FREMAA), and **Assam State Disaster Management Authority (ASDMA)**.

AIRBMP project has 3 Components and Component 1 covers Institutional Development and Strategic Studies. Under this component 1, ASDMA will undertake three studies, one of them is “**Strengthening ASDMAs capacity for Post Disaster Needs Assessment.**”

## 1.1 Vulnerability Profile of Assam

Assam is prone for multiple disasters such as flooding (fluvial and flash), extreme rainfall, river erosion, landslides, earthquake, cyclone wind, and drought. Assam comprises of a large network of rivers and tributaries originating from the upper catchments of the state with high gradient which joins the Brahmaputra and Barak rivers to form a highly dynamic and complex river system. High rainfall ranging from 1750 mm in the plains to about 6400 mm in the hills in the state and upper catchment which includes Arunachal Pradesh, Meghalaya, Nagaland, Mizoram and Manipur and neighboring country Bhutan causes severe floods in Assam.

During recent years, due to incessant rains, the soil in hilly areas was saturated and became loose, triggering landslide in many places. Several landslides happened in hilly regions across the state (2022), adding to the impact of floods. In addition to deaths, large numbers of houses are fully damaged. Agricultural lands have also borne the brunt of the floods and landslides.

Severe erosion continues in a number of locations along the banks of Brahmaputra and many of its tributaries. Severe damages to private and public properties including roads, bridges,

embankments, education and health buildings, residential/commercial and industrial buildings, power, telecommunication, transportation infrastructures, homesteads, and cultivated land happen every year.

Assam falls within an earthquake prone Zone V (Very High Damage Risk Zone). The State of Assam has experienced several devastating earthquakes in the past resulting in many deaths and severe property damage. Active seismicity of the Northeastern region has caused extensive landslides, rock falls on the hill slopes, subsidence and fissuring of ground in the valley, and changes in the course and configuration of river tributaries of Brahmaputra and Barak river systems. These changes, especially in river morphology have a significant impact on the hydrologic regime and vulnerability of the communities which are in its proximity and are dependent upon this natural system as their source of livelihood.

Assam is situated in the northeastern direction of Bangladesh which is highly prone to cyclones accompanied by high speed winds. Every year about 60% of the area is affected by cyclones which reach Bangladesh. Due to their geographic locations, districts like Dhubri, Gaolpara, Hailakandi, Chachar and Karbi Anglong are affected due to cyclones. Assam suffers periodic droughts due to variability in rainfall pattern over the years. Since 2010, Assam has witnessed drought like situation twice, affecting large number of districts. 14 districts of Assam witnessed drought like situation in 2014, and again in 2019, 20 districts experienced less rain and drought like situation. Rise in temperature is expected to reduce production of staple crops such as rice, horticulture produce, economically important tea produce, milk yields, and fish catch affecting the agriculture productivity and livelihood of people of Assam.

Mainly due to the multiple disasters several sectors are severely affected, and the major sectors are:

- Agriculture, Livestock, Fisheries
- Water & Sanitation
- Water resources
- Employment & Livelihoods
- Critical Infrastructure power, rail, road, broadband
- Industries and Trade
- Housing
- Education
- Health
- Tourism
- Transport
- Communications
- Culture

- Cross Cutting (Women, Children, old age, People with Disabilities, Environment etc.)

Above sectors which are affected by multiple disasters are handles by several government ministries mentioned below.

## **1.2 Govt. Departments with primary responsibilities**

1. Revenue & DM Department: DM Operations and Plans, Warnings
2. Home Department: Law & Order, Safety & Security
3. Health & Family Welfare Department: Medical Care and Health Services
4. Public Works Department (Buildings): Buildings & Lifeline Infrastructure
5. Public Works Department (Roads): Communication Infrastructure (Roads & Bridges)
6. Public Health Engineering Department: Drinking Water Supply & Sanitation
7. Transport Department: Transport Systems
8. Food & Civil Supplies Department: Emergency supply of food & basic needs
9. Information & Public Relations Department: Broadcasting & relay of public information
10. Social Welfare Department: Welfare Services
11. Agriculture Department: Drought management
12. Water Resources Department: Flood protection and river erosion management & Drainage development works
13. Power (Electricity) Department: Power supply
14. Education Department: DM Education & School/Institution Safety
15. Panchayat & Rural Development Department: Vulnerability reduction in rural areas
16. Housing & Urban Affairs Department: Vulnerability reduction in urban areas & built environment
17. Finance Department: Finance arrangements
18. Animal Husbandry & Veterinary Department: Livestock management, animal care services
19. Environment and Forests Department: Protection of natural resources and environment
20. Soil Conservation Department: Soil erosion and soil conservation
21. Department of Geology & Mines: Earthquake & Landslide
22. Department of Fire & Emergency Services: Fire

## **1.3 Objectives of the PDNA in Assam**

A systematic assessment of damage & loss and recovery needs, provides the essential basis for a large-scale recovery effort. The Post-Disaster Needs Assessment (PDNA) is planned to jointly be conducted by the NDMA, ASDMA, NIDM and their development partners. PDNA

represents a tool and methodology for assessing damage and loss and estimating recovery needs. The PDNA has been developed over the last decade through an international effort, and it has emerged as a standard methodology for assessment of damage, loss and recovery needs internationally.

The PDNA provides a consolidated assessment report, which includes information on damage and loss in all the sectors affected by a disaster. Along with information on damage and loss, the report highlights recovery needs. As the recovery needs are consolidated for all the sectors, the report also presents a recovery strategy, which includes a recovery plan for each sector and region, the timeframe and expected cost of the recovery process.

The important aspect that the current study acknowledges is the differential strategic approach that requires to be taken for each sector within the larger pretext of ‘build back better’ aimed mostly to strengthen systems and local capacities. Even though each sector has their own specific strategy, the convergence of common recovery visions for achieving resilience is of utmost importance. The fundamental reason for this is the interaction of demographic and development variables with each other which influence the overall Risk Profile of the state. Recovery Needs for each sector are proposed with a strategy designed with a short-, medium- and long-term vision so that implementation actions could be monitored, evaluated and improved at each step of intervention.

The PDNA would be led by the Government of Assam (ASDMA) to assess the impact of the floods, erosion, landslides, earthquake, cyclone and drought on infrastructure, housing, livelihoods and all the other sectors. PDNA study would help for recovery and reconstruction strategy including sector-specific costs, which would reflect the concept of ‘Build Back Better’ and resilient recovery.

The specific objectives of the PDNA study are to:

- Sector(s) specific impacts due to disasters such as floods, earthquake, landslides, erosion, cyclone, drought etc. in Assam;
- Assess the overall socio-economic impact of the disasters on the people, livelihood and economy.
- Identify priority needs for affected households and critical sectors of the economy with a particular focus on resilient recovery and reconstruction.
- Recommend institutional mechanisms and policy measures to be undertaken in support of the recovery, reconstruction and infrastructure development.
- Enhancing capacity of Government Officials for conducting PDNA.
- Review current DRR policies and measures in place to deal with disasters and recommend measures to improve prevention and mitigation.
- Develop training modules and deliver it systematically to line departments of the State
- Pilot the PDNA tool for real-time events and documentation

## 2 Project Components

‘Strengthening ASDMA’s capacity for Post Disaster Needs Assessment’ project has been divided into the following four components:

### **Component A – Development of standardized PDNA tools for Assam**

National Institute Disaster Management, NDMA, Ministry of Home Affairs already standardized the PDNA tools for India through set of guidelines in the form of user manual, handbook, and standard Operating Procedures (SOP). Since these guidelines are generic in nature for pan India, there is a necessity of customizing them for Assam, keeping view of the social, cultural, and economic variation. This component focuses on this.

### **Component B - Dissemination of the PDNA tools and training**

Standardized PDNA tools developed in Component A is to be disseminated among the government officials at various levels (Village/Revenue Circle/District/State) to understand the tool and collect the data during future disastrous events. Several capacity building programs are envisaged in this component, which will benefit the multi-level stakeholders.

### **Component C – Pilot testing of the PDNA tools**

Standardized PDNA tools developed in Component A and disseminated in Component B is to be piloted in the five vulnerable districts viz. **Lakhimpur, Bongaigaon, Morigaon, Majuli** and **Cachar** one in each from five divisions across Assam, suitably to assess the usability as well as improvements required in the tool. This is envisaged in the component.

### **Component D – Development of web-based portal and Mobile Application**

Usage of PDNA tools developed need to be made very simple, in view of the urgency of data collection just after the strike of disaster event. An effort in this direction is envisaged in this component, through development of web portal which can be made live during emergencies for data collection quickly synchronizing the existing data collection system of ASDMA. Moreover, a mobile application tool for data collection in the field will be developed which can live feed to web portal and monitoring of the data collection in the disaster affected areas.

Therefore, there is a need to develop tools and techniques for Post Disaster Needs Assessment (PDNA). This shall include an assessment of:

- a) Damage as the replacement value of totally or partially destroyed physical assets that must be included in the reconstruction process.
- b) Losses in the flows of the economy that arise from the temporary absence of the damaged assets., and, socio-economic losses and losses to the environment that are not quantified and will be included in the total disaster loss profile
- c) The resulting impact on post-disaster economic performance, with special reference to impact on State Economy.

The formation of standardized tools of PDNA customized for Assam shall revamp the entire system of Damage, Loss, and Needs Assessment in Assam from a subjective to a scientific and

objective approach, which shall encompass the physical, socio-economic and environmental damages and losses.

### 3 Objectives of the Study Project

- To evolve standardized PDNA tools relevant to Assam
- To revamp the entire system of Damage, Loss and Needs Assessment in Assam as per the new PDNA tools.
- Provide recommendations for integrating the new PDNA tools in the existing damage / loss assessment procedures at all levels (village/revenue circle/district/state)
- Create a panel of experts for subsequently undertaking assessments using the new PDNA tools and building the capacities/ advocacy of relevant stakeholders at multi-level
- Develop a mobile application which can be used to collect PDNA data during post disaster emergencies and a web portal to monitor the data collected through the mobile application and assess the post-disaster needs in quick time synchronizing the existing data collection system of ASDMA.

### 4 Scope of the Study

#### 4.1 Area of Study

Area of study will be in 31 districts mentioned below across Assam which are affected or likely to be by multiple disasters. Moreover, the PDNA tool will be piloted in the five vulnerable districts viz. **Lakhimpur, Bongaigaon, Morigaon, Majuli** and **Cachar** one in each from five divisions in Assam.

Table 4-1: Area of Study

Name of Division	Division Headquarter	Districts under Jurisdiction
North Assam	Tezpur	Udalguri, Darrang, Sonitpur, Biswanath, <b>Lakhimpur</b> , Dhemaji
Lower Assam	Panbazar, Guwahati	Dhubri, Kokrajhar, <b>Bongaigaon</b> , Goalpara, Baksa, Chirang, Barpeta, Nalbari, Kamrup, Kamrup Metro, South Salmara
Central Assam	Nagaon	Dima Hasao, East Karbi Anglong, West Karbi Anglong, Nagaon, <b>Morigaon</b>
Upper Assam	Jorhat	Dibrugarh, Tinsukia, Sibsagar, Jorhat, Golaghat, <b>Majuli</b>
Barrak Valley	Silchar	<b>Cachar</b> , Hailakandi, Karimganj



## 4.2 Stakeholders for the Study

All concern government officials of the following departments, ministries and/or agencies are the stakeholders who are responsible for the PDNA of their respective sector and sub-sectors at all the levels (village/revenue circle/district/state) within the geographical areas which are affected in the past / likely to be affected in future due to multi-hazards. Multiple assessment teams need to be organized / planned to simultaneously conduct a PDNA in the affected districts.

*Table 4-2: Details of Government officials & departments, ministries and/or agencies*

<b>PRIMARY RESPONSIBILITY</b>	<b>DEPARTMENT</b>
DM Operations and Plans, Warnings	Revenue & DM Department
Medical Care and Health Services	Health & Family Welfare Department
Law & Order, Safety & Security	Home Department
Emergency Response, Search & Rescue	Home Department
Buildings & Lifeline Infrastructure / Communication Infrastructure (Roads & Bridges)	Public Works Department
Drinking Water Supply & Sanitation	Public Health Engineering Department
Transport Systems	Transport Department
Emergency supply of food & basic needs	Food & Civil Supplies Department
Broadcasting & relay of public information	Information & Public Relations Department
Welfare Services	Social Welfare Department
Drought management	Agriculture Department
Flood protection and river erosion management & Drainage development works	Water Resources Department
Power supply	Power (Electricity) Department
DM Education & School/Institution Safety	Education Department
Vulnerability reduction in rural areas	Panchayat & Rural Development Department
Vulnerability reduction in rural areas	Revenue Department
Vulnerability reduction in urban areas & built environment	Housing & Urban Affairs Department
Finance arrangements	Finance Department
Livestock management, animal care services	Animal Husbandry & Veterinary Department
Protection of natural resources and environment	Environment and Forests Department
Soil erosion and soil conservation	Soil Conservation Department
Earthquake & Landslide	Department of Geology & Mines
Fire	Department of Fire & Emergency Services

## 4.3 Scope of Services

The scope of services envisaged in this study has the following three parts:

### 4.3.1 Development of standardized PDNA tools for Assam

1. Preparation of an Inception Report with work plan, methodology & detailed work schedule for the contract period.
2. To analyze and document the existing procedures of Damage, Loss and Need Assessment in all the districts of Assam, which are subjected multi-disasters in the past. This shall also include present formats of reporting adopted by the government of Assam as well as some central government Departments/ ministries e.g. Ministry of Agriculture, Ministry of Home Affairs, CWC, NESAC, IMD etc. if applicable.
3. To analyse the existing guiding documents i.e., handbook / manual / SOP for PDNA issued by Disaster Management Division of Ministry of Home Affairs, Government of India and customize all the documents (handbook / manual / SOP) for the state of Assam.
4. Identifying the suitable multi-stakeholders for a *consultation-cum-advocacy workshop(s)* including field personnel who will be involved in actual data collection and collation. Number of workshops may be decided based on the diversity of data to be collected. The purpose of these workshops is to take feedback from the actual practitioners from the customized PDNA tools for Assam (developed at 3) and finalize them for implementation.
5. Multi-level training needs assessment need to be carried out at various administrative levels before planning for the capacity building training with the approval of competent authority.
6. Development of the training material (training modules, Training tools/aids, handouts, power point, audio-visuals, reports, participant profile, etc.) and materials needed for specialized trainings mentioned in the Table: 1
7. Deliver the trainings in coordination with DDMA/ ASDMA
8. The consultant must take care of the boarding / lodging, transportation of participants (as per prevailing govt. norms) and resource persons, venue selection/rent/accommodation etc.
9. Submission of Final documents (handbook / manual / SOP/training material/maps/geo-database or any other relevant material and documents) revised after the consultation-cum-advocacy workshops and along with road map for implementation including dissemination of the tools and capacity building.

### 4.3.2 Dissemination of the PDNA tools and training

1. To develop five sets of separate Training Modules for PDNA supplemented by excellent Audio-visual tools to enhance the substance and quality of training, along with suggested readings. One for Training of Trainers and rest of the trainings related to the different departmental officials at state, district and revenue circle level.

2. Build the capacity of the all the relevant agencies/organizations/ departments/ institutions that will use the new tool and key strategy by incorporating the new PDNA tools into the existing system and thereby, revamping the whole system for conducting PDNA in Assam through 5 sets of trainings as mentioned below table

Table 4-3: Capacity building training planned in PDNA.

Sr. No.	Name of Trainings	Number of trainings	Number of Target participants
1	Training of Trainers at State Level (Clustered Districts)	10	Total: 310 (@ 10 per district)
2	Training of departmental officials at District Level	31	Total: 1550 (@ 50 per training) at district level
4	Training of Revenue Circle Officials for implementation (hands on training with mobile app, etc.)	31	Total: 310 (@ 10 per Revenue Circle) at District Level
5	Orientation training for senior officials at State Level) accommodating all the departments	3	Total: 90 (@30 per batch)
6	Specialized training for five pilot district officials	5	Total 250 (@ 50 per district)
	Total	80	

Table 4-4: Training of Trainers Module

Learning Unit	Topic	Methodology
1	The present post-disaster assessment in India	Lecture, Video Discussions, Group work and Case Studies
	1. Disaster Response Funds guidelines	
	2. The Relief memorandum	
	3. Other protocols	
2	The PDNA conceptual framework	
	1. Concepts and definitions.	
	2. The sectors for assessment.	
	3. Inter-sectoral linkages.	
	4. Crosscutting issues.	
3	Standard procedures in undertaking a PDNA	
	1. Baseline information	
	2. Field Assessment	
	3. Aggregation of data	
	4. Estimation of needs	
4	Sector Guidelines for Undertaking PDNA	
	1. Baseline Information of Selected Sectors	
	2. Assessment of Disaster Effects	
	3. Estimating Damages and Losses	
	4. Scenario based Group Exercise	

Learning Unit	Topic	Methodology
5	Aggregation of disaster effects and impact assessment	Lecture, Group Work, Video, Case Study Simulation Exercise/ Practice
	1. Summary of damages and losses	
	2. Macroeconomic impact assessment	
	3. Social impact assessment	
	4. Exercises	
	5. Gender impact assessment	
6	6. Personal and household levels impacts	
	Estimation of post-disaster recovery needs	
	1. Identification of needs	
	2. Prioritization of needs	
7	3. Estimation of the amount of recovery needs	
	4. Developing the recovery framework	
	Improving Training and Presentation Skills for PDNA	
	1. PDNA Training Skills and Requirement	
	2. PDNA Delivery and Facilitation	
3. Effective PDNA Learning Tools		
4. Simulation Exercise: Conducting PDNA Training		
5. PDNA Training Course Evaluation		

#### 4.3.2.1 Develop a panel of Professionals

A panel of professionals will be developed throughout the course of training (reference table 1). The panel will consist of 5 representatives from each district and 10 from ASDMA who will facilitate and guide any PDNA exercise at district and state level in future.

#### 4.3.3 Pilot Testing of the PDNA tools

During the time of the study, the consultants shall test the tools, methodology and formats developed for PDNA in five of the pilot districts in Assam. The districts for the pilot testing of PDNA tools will be **Lakhimpur, Bongaigaon, Morigaon, Majuli** and **Cachar** one in each from five divisions across Assam.

#### 4.3.4 Development of web-based portal and Mobile Application

The methodology developed for PDNA, need to be customized in a web portal as well as a mobile application which can be used by the field team to collect the necessary PDNA data for all the sectors. This will be an iterative way including data (qualitative/quantitative), geo-location, photographs etc. synchronizing the existing data collection system of ASDMA

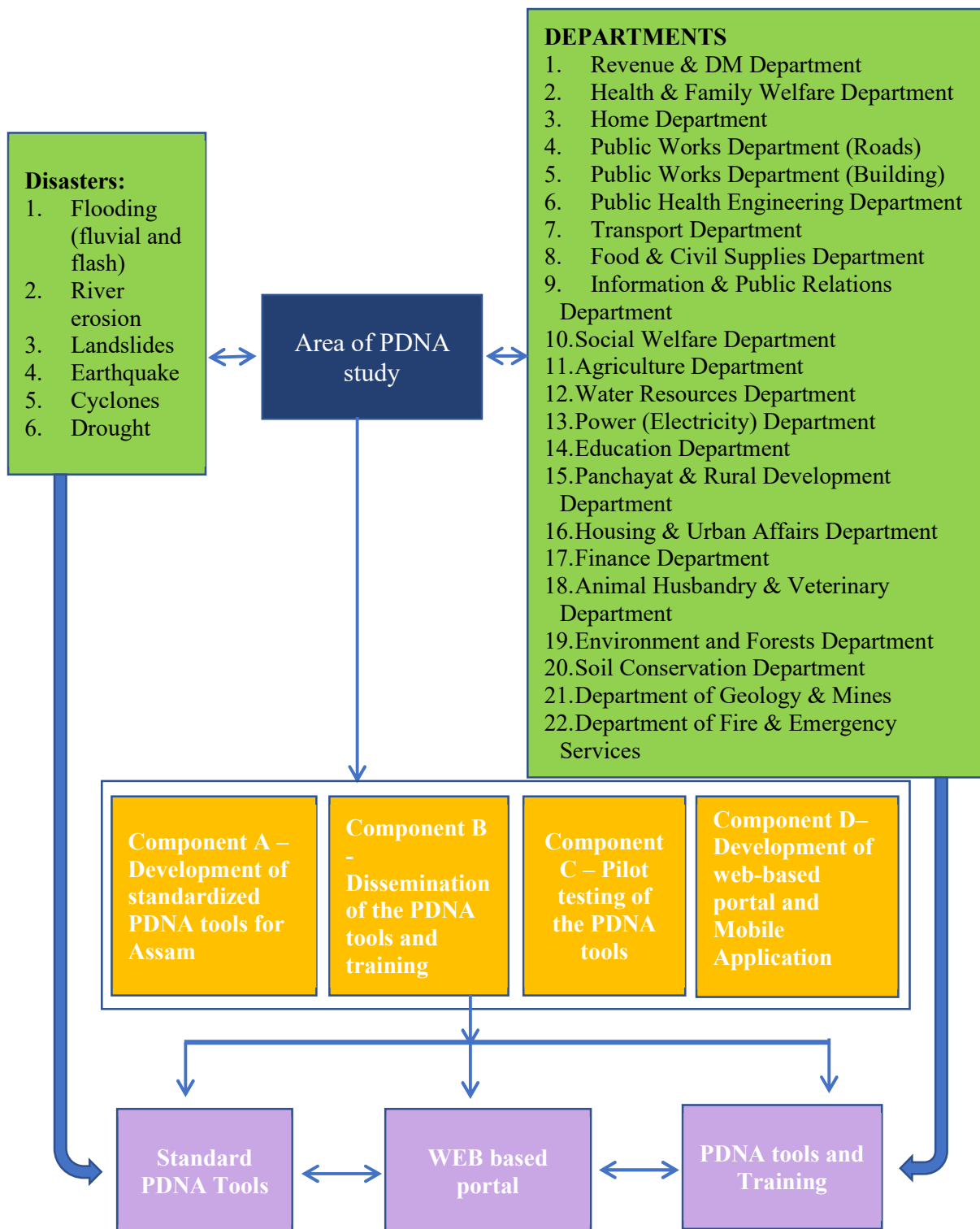


Figure 4-1: Conceptual Framework for the Study

## 5 Methodology

The methodology for conducting each component of the study shall be clearly spelt out, tested and validated with ASDMA, FREMAA, PMTC team and other stakeholders through presentation after submission of Inception Report.

## **6 Deliverables and Tentative Timelines**

### **6.1 List of Reports and Schedule of Deliveries**

The Consultant shall prepare the following reports in English and complete digital files in a format and manner acceptable to the ASDMA. All the reports will need to be reviewed and approved by the ASDMA/PIU and no-objection will be sought from the Review Committee before being finalized for payments. Draft versions of the report would be prepared initially and submitted in 3 hard copies and 1 soft copy. Final versions would be submitted within two weeks following receipt of comments from the ASDMA/PIU (*an exception shall be for the Monthly and Quarterly Reports where the report is to be finalized in one week*). ASDMA/PIU's comments would generally be provided within one week of receipt of the draft report. The consultant will be required to make a power point presentation with all important deliverables.

#### **6.1.1 Inception Report (IR)**

The draft IR shall be submitted within one month after commencement of assignment. The IR shall *inter alia* include approach to the assignment, objectives, detailed methodologies, and work plans for each Task (and respective sub-activities) of the assignment. It must also detail the related tasks, activities, schedule of activities, detailed time-tasks/schedule listing of all tasks, mobilization plan, anticipated difficulties including resource gaps that have become apparent. It must bring to Client's attention regarding major problems that might affect the direction and progress of the work.

#### **6.1.2 Monthly Reports (MR)**

The draft MR shall be submitted within a week from the end of each month. The MR shall *inter alia* include work progress on all components, tasks undertaken, results achieved, meetings held and persons met, staff deployment, difficulties encountered, and forecast of assistance required from the client for each activity/task of the assignment. The monthly reports shall also incorporate monthly progress for project components as well as the deliverable tables for the input-based payments.

#### **6.1.3 Quadrimester Report (QR)**

The draft Quadrimester (4-monthly) report shall be submitted within two weeks from the end of the quadrimester for which the report is submitted. The QR shall *inter alia* include work progress, team mobilization, tasks undertaken, results achieved, meetings held, and persons met, planning of activities for next trimester, updated works schedule and staff mobilization plan, status of M&E indicators, difficulties encountered, forecast of assistance required for each component of the assignment from the client.

#### **6.1.4 Annual Reports (AR)**

The annual reports shall be submitted within week from the end of fiscal year for which the report is submitted. The AR shall *inter alia* include work progress, team mobilization, tasks undertaken, results achieved, meetings held and persons met, planning of activities for next quarter, updated works schedule and staff mobilization plan, status of M&E indicators, difficulties encountered, forecast of assistance required for each component of the assignment from the client.

#### **6.1.5 Mid-term Report (MTR)**

The mid-term report shall be submitted within two weeks after the contract is halfway through the contract period. The MTR shall *inter alia* include work progress, team mobilization, tasks undertaken, results achieved, meetings held and persons met, planning of activities for next quarter, updated works schedule and staff mobilization plan, status of M&E indicators, difficulties encountered, forecast of assistance required for each component of the assignment from the client.

#### **6.1.6 Final Report**

The completion report of the consultant providing the details of overall work progress and final documentations.

### **6.2 Report Format**

- a) The report shall contain/present the data, information, assumptions and corresponding justification, analysis, and conclusions and recommendations.
- b) All reports required by the ToR shall provide a clear presentation and include a table of contents and an executive summary. The main body of the text shall be organized in sections and focus on the findings and recommendations and their justification. Supporting data and analysis shall be included in the Annex which will be referenced as appropriate in the body of the text. All paragraphs in the executive summary, main text, and Annex(es), shall be numbered to facilitate reading across the report.
- c) The report shall be illustrated as appropriate with such drawings, sketches, photographs, tables, graphs, and maps to aid comprehension and assimilation of their contents.
- d) The consultants will need to submit a draft template for all reports as part of the inception report which will be reviewed by the ASDMA/PIU and Review Committee for adequacy. The consultant will incorporate all suggestions and submit the deliverables accordingly.

### **6.3 Deliverables and Milestones**

All the reports (Inception, Monthly, Quadrimesterly, Yearly, Mid Term and Final reports) should be submitted in hard and soft copies, as appropriate, to the PIU/ASDMA within the set times. Key representatives will meet the client in person for monthly update on work progress. ASDMA/FREMAA/PMTC shall submit its comments on the reports submitted by the

consultant within a period of maximum 2 weeks from the date of submission/discussion of the report/ draft.

Table 6-1: Deliverables

Sr. No.	Deliverables	Duration (from the effective date of contract (T))	Evaluation and approval
	<b>Inception Report</b>		Concerned committee
1	Submission & Presentation of Inception Report	T+ 6 weeks	
2	Submit the revised inception report	T+8 weeks	
	<b>Analysis of Existing PDNA Procedures</b>		Concerned committee
3	Report containing analysis and documentation of existing Damage, Loss and Need Assessment methodology in Assam	T +24 weeks	
4	First Draft of the proposed PDNA tools + one state level consultation and advocacy workshop including demonstration of the Web Portal	T +34 weeks	
5	Final Report on “PDNA Tools for Assam”; along with web-based portal and mobile application	T +42 weeks	Concerned committee
	<b>Training Module</b>		Concerned committee
6	Delivery and finalization of 5 sets of separate Training Modules 78 number of trainings	T +56 weeks	
7	Conducting 5 sets of training (total 73 numbers) programs on the new PDNA tool targeting state and district officials	T +86 weeks	
8	Training to develop a panel of professionals (5 representatives from each district and 10 from ASDMA)	T+90 weeks	
9	Final approval of ASDMA (supported by FREMAA and PMTC)	T+96 weeks	Concerned committee

#### 6.4 Proposed timelines and schedule for completion of tasks

The study part of the project is planned to be completed over a period of **24 months**. This includes the training programme to be conducted for the identified persons. Please refer a broad timeline in the deliverables section (Ref-Table 2). The Consultant shall provide a detailed time schedule for undertaking all the activities of the consultancy in a Gantt chart. The time schedule would be reviewed every month and updated if found necessary.



## 6.5 Review of Consultant’s Work

The consultants’ work will be monitored by a review committee chaired by CEO, ASDMA, and comprising representatives from ASDMA, FREMAA, PMTC and relevant experts. The consultants shall submit a draft of each of the above-mentioned deliverables to each member of the committee as per the timelines above. Presentations at various level will be made and finally to the committee at pre-defined dates agreed at the start of the project to discuss the draft deliverables submitted till the date of the presentation and capture feedback of the committee members.

## 7 Support from ASDMA

Consultant shall be expected to collect necessary data for the study. However, the ASDMA and concerned departments would facilitate the consultant in procuring any data from the Central /State / District Governments offices, in case required.

## 8 List of Key Positions and Their Roles and Responsibilities

Table 8-1: Recommended team composition

Sr. No.	Position	Qualifications & Experience
1.	Team Leader	Postgraduate with Economics background with at least 15 years of experience; having relevant experience in post disasters damage and loss assessment. Experience of working in post-disaster reconstruction and recovery field is essential.
2.	Engineering Expert –I (Housing sector)	Postgraduate in Civil Engineering with at least 10 extensive experiences in vulnerability / damage assessment, housing reconstruction programme. Experience of working in Housing and Infrastructure Development desirable.
3.	Engineering Expert – II (Infrastructure Sector: such as roads, bridges, power etc.)	Postgraduate in Civil Engineering with at least 10 years having relevant experience in design and construction of power/transport type of infrastructure projects (non-building).
4	WASH specialist	Postgraduate in Civil Engineering with specialization in Public Health Engineering/ Environmental Engineering with least 10 years of relevant experience in project execution and management in WASH sector.
5	Expert in agriculture	Postgraduate in Agriculture or relevant field with at least 8 years having relevant experience in agriculture sector, having undertaken drought risk assessment.

<b>Sr. No.</b>	<b>Position</b>	<b>Qualifications &amp; Experience</b>
7	Social Development Expert	Postgraduate in Social Sciences / Humanities / Community Health with at least 10 years of experience having relevant experience in assessment of impact of disasters on social infrastructure.
8	Disaster Management Expert	Postgraduate with at least 10 years of experience in disaster management and having experience in disaster reconstruction and recovery projects
9	Financial Expert	Postgraduate in Finance with at least 10 years of experience in disaster risk finance and related instruments towards effective planning and management of post disaster construction.
10	Environment Expert	Post graduate in Environment Sciences with minimum 10 years of experience in EIA, disaster impact assessment or having undertaken assessment of damage and restoration works of environment damage arising from a disaster.
11	Economic Analysis Expert	Postgraduate in Economics with at least 7-10 years of relevant experience in assessment of economic losses (agriculture, livelihoods, infrastructure etc.) due to disasters and undertaken past modeling studies for economic impact analysis of disasters.
12	Governance Expert	Post Graduate with at least 10 years of experience with government and well versed in government procedures and processing
13	System Engineer/ IT Expert (development of software, Web tools & Mobile app)	Postgraduate with at least 7-10 years of experience in the field of developing IT tools/software for Disaster Management.

*Table 8-2: Key Positions and Their Roles and Responsibilities*

<b>Sr. No.</b>	<b>Key Experts</b>	<b>No.s</b>	<b>National/ International</b>	<b>Person-Months</b>	<b>Indicative Activities</b>
1.	Team Leader	1	National	24-man month	Component A, B, C and D
2.	Engineering Expert –I (Housing sector)	2	National	48-man month	Component A, B, C and D
3.	Engineering Expert – II (Infrastructure like roads, bridges, power etc.)	2	National	48-man month	Component A, B, C and D
4	WASH specialist	1	National	24-man month	Component A, B, C and D
5	Expert in agriculture field	1	National	24-man month	Component A, B, C and D

Sr. No.	Key Experts	No.s	National/ International	Person- Months	Indicative Activities
6	Expert in veterinary field	1	National	24-man month	Component A, B, C and D
7	Social Development Expert	1	National	12-man months	Component A, B, C and D
8	Disaster Management Expert	1	National	24-man months	Component A, B, C and D
9	Financial Expert	1	National	12-man months	Component A, B and D
10	Environment Expert	1	National	12-man months	Component A, B and C
11	Economic Analysis Expert	1	National	8-man months	Component A, B and C
12	Governance Expert	1	National	4-man months	Component A and B
13	System Analyst/ MIS Expert/ IT Expert (software development)	1	National	8-man months	Component C and D
Total requirement				272-man months	

**Note:** The above list is indicative and articulates minimum requirement. Based on the selected methodology and approach, agency will have to submit their team composition with specific role articulations